OTTER CREEK BRIDGE II
Yellowstone Roads and Bridges
Spanning Otter Creek on a spur
of Grand Loop Road
Yellowstone National Park
Park County
Wyoming

HAER No. WY-47

HAER
WYO
15-YELNAP,
12-

BLACK & WHITE PHOTOGRAPHS

WRITTEN HISTORICAL & DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
P.O. Box 37127
Washington, DC 20013-7127

Rocky Mountain Regional Office
National Park Service
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

HAER
WYO
15-YELNAP,
12-

HAER WY-47

HISTORIC AMERICAN ENGINEERING RECORD

OTTER CREEK BRIDGE II
~~HAER WY-47~~

Location:	Spanning Otter Creek on a spur of Grand Loop Road, 2.8 miles south of Canyon Junction, Yellowstone National Park, Wyoming UTM: Norris Junction, WY, Quad. 12/538900/4949650
Date of Construction:	1935
Owner:	Yellowstone National Park, National Park Service
Use:	Vehicular bridge
Designer:	Architectural plans by W.G. Carnes, National Park Service General plans and specifications by H.R. Anguin, Bureau of Public Roads
Builder:	Charles M. Smith
Significance:	Otter Creek Bridge II typifies the early design philosophy of the National Park Service, which was to use indigenous materials to harmonize man-made features with their natural surroundings. This philosophy is embodied in many of the park's Rustic Style buildings and structures.
Project Information:	Documentation of Otter Creek Bridge II is part of the Yellowstone Roads and Bridges Recording Project, conducted during the summer of 1989 by the Historic American Engineering Record, a division of the National Park Service, under the co-sponsorship of Yellowstone National Park, the NPS Roads and Bridges Program, and the NPS Rocky Mountain Regional Office, Denver. Historical research and written narrative by Mary Shivers Culpin, Historian, NPS Rocky Mountain Regional Office. Engineering description by Steven M. Varner, Virginia Polytechnic Institute. Edited and transmitted by Lola Bennett, HAER Historian, 1993.

HISTORY OF GRAND LOOP ROAD

(See HAER WY-24, Yellowstone Roads and Bridges.)

HISTORY OF GRAND LOOP ROAD: LAKE JUNCTION TO TOWER JUNCTION

(See HAER WY-33, Tower Creek Bridge.)

DESIGN AND CONSTRUCTION OF OTTER CREEK BRIDGE II

In September 1930, a road was started from a point on the Lake Junction to Canyon Junction section of Grand Loop Road to the proposed site of a bear feeding ground. The road project covered 3,150 feet of main roadway which included the return loop and parking area at the site, in addition to 700 feet of narrow road to the feeding platform. The 14-foot wide roadway had several passing pullouts, and for about 300 feet along the return loop, the width expanded from 40' to 60' to allow for parking. All but the surfacing was completed by October 1, but bad weather delayed the surfacing until the following spring. As part of the project, the crew built a standard (Landscape Architecture Division design) 42-foot long, 16-foot wide, timber bridge across Otter Creek. The pit run gravel surfacing material came from a pit on the Yellowstone River bank, about one-half mile away. A thin coat of Obsidian sand followed by a skin coat of oil finished the surface. On June 19, 1931, the crews begin the construction of the bear feeding ground.[1] The timber bridge was replaced in 1935 by an arched concrete deck girder with concrete abutments.

DESCRIPTION

The one-span bridge, with a maximum span length of 20', was built as part of the Lake Junction to Canyon Junction road project of 1934 and 1935. The span length is measured from center of support to center of support. The structure length is 64' from end of wing wall to end of wing wall. The deck width is 24' while the bridge roadway from curb to curb is 22' wide.[2]

The forms for the abutments, wing walls and girders were of 8-inch minimum width and 8-foot minimum length with staggered vertical joints. The lumber was band-sawed and oiled after the vertical joints were filled. All exposed concrete was stained with three coats of Copperas.[3]

The guard rail consists of 10"-diameter log posts, 8'-2" on center, rising 2'-1" above the curb. They are sunk into an 8'-diameter pipe sunk about 20" into the curb. The rail is an 8-inch-diameter log attached with ¾-inch galvanized bolts countersunk on the same side the rail is on, the roadway side. The post is cut back 2" to receive the rail. The rail received two coats of brown stain.[4]

ENDNOTES

1.C.A. Lord, "Final Report Loop Betterment-Project #525.6, Otter Creek Road and Bear Feeding Ground."

2."Bridge Inspection Report, Otter Creek Bridge, August 6, 1986," Federal Highway Administration, Western Direct Federal Division, U.S. Department of Transportation.

3."Otter Creek Bridge Architectural Plans, February, 1934," Branch of Plans and Design, Office of National Parks, Buildings and Reservations.

4.Ibid.